

INCH-POUND

MS17841D
21 May 2004
SUPERSEDING
MS17841C
18 November 1976

DETAIL SPECIFICATION SHEET

VALVES, SOLENOID, REFRIGERANT-12

Inactive for new design after
1 April 1996.

This specification is approved for use by all Departments and
Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet.

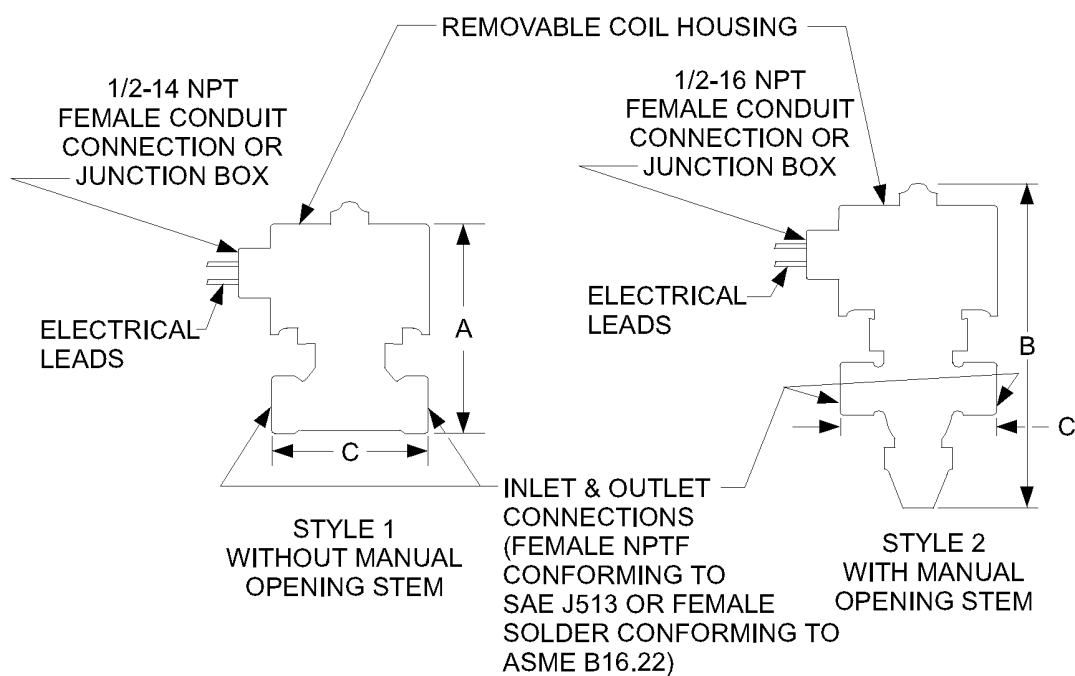


FIGURE 1. Solenoid valve.

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TABLE I. Valve characteristics.

Dash number	Type	Style	Max. dimensions (in.)			Size	Electrical rating	Connection size	
			A	B	C			Pipe (P)	Tubing (T)
-1	I	1	6.250	8.250	3.250	1	120/50-60 Hz	3/8 in.	1/2 in.
-2	I	1	6.250	8.250	3.250	1	208-240/50-60 Hz	3/8 in.	1/2 in.
-3	I	1	6.250	8.250	3.250	1	12 V DC	3/8 in.	1/2 in.
-4	I	1	6.250	8.250	3.250	1	24 V DC	3/8 in.	1/2 in.
-5	I	2	6.250	8.250	3.250	1	120/50-60 Hz	3/8 in.	1/2 in.
-6	I	2	6.250	8.250	3.250	1	208-240/50-60 Hz	3/8 in.	1/2 in.
-7	I	2	6.250	8.250	3.250	1	12 V DC	3/8 in.	1/2 in.
-8	I	2	6.250	8.250	3.250	1	24 V DC	3/8 in.	1/2 in.
-9	I	2		8.500	3.375	2	120/50-60 Hz	1/2 in.	5/8 in.
-10	I	2	-	8.500	3.375	2	208-240/50-60 Hz	1/2 in.	5/8 in.
-11	I	2	-	8.500	3.375	2	12 V DC	1/2 in.	5/8 in.
-12	I	2	-	8.500	3.375	2	24 V DC	1/2 in.	5/8 in.
-13	II	1	8.000	8.500	3.250	3	120/50-60 Hz	1/2 in.	5/8 in.
-14	II	1	8.000	8.500	3.250	3	208-240/50-60 Hz	1/2 in.	5/8 in.
-15	II	1	8.000	8.500	3.250	3	12 V DC	1/2 in.	5/8 in.
-16	II	1	8.000	8.500	3.250	3	24 V DC	1/2 in.	5/8 in.
-17	II	2	8.000	8.500	3.250	3	120/50-60 Hz	1/2 in.	5/8 in.
-18	II	2	8.000	8.500	3.250	3	208-240/50-60 Hz	1/2 in.	5/8 in.
-19	II	2	8.000	8.500	3.250	3	12 V DC	1/2 in.	5/8 in.
-20	II	2	8.000	8.500	3.250	3	24 V DC	1/2 in.	5/8 in.
-21	II	2	-	8.750	3.250	4	120/50-60 Hz	1/2 in.	5/8 in.
-22	II	2	-	8.750	3.250	4	208-240/50-60 Hz	1/2 in.	5/8 in.
-23	II	2	-	8.750	3.250	4	12 V DC	1/2 in.	5/8 in.
-24	II	2	-	8.750	3.250	4	24 V DC	1/2 in.	5/8 in.

NOTES:

1. Type I - liquid refrigerant
Type II - refrigerant gas
2. Style 1 - without manual opening stem
Style 2 - with manual opening stem
3. Capacity rating:
Size 1 - 3.0 tons of refrigerant (TR) (10548 watts (W)) minimum capacity
Size 2 - 7.5 TR (26370 W) minimum capacity
Size 3 - 2.5 cubic feet per minute (CFM) (.0127 meter per second (M³/s)) minimum capacity
Size 4 - 5.0 (CFM) (.0254 (M³/s)) minimum capacity
(Rating conditions for liquid refrigerant based on a flow of 3.9 lbs/min/ton of refrigeration with a 2-PSI pressure drop across the valve, a condensing temperature of 100°F, and a suction temperature of 40°F.
Rating conditions for refrigerant gas based on a flow in CFM of refrigeration with a 5 PSI pressure drop across the valve, a condensing temperature of 100°F, gas with a 20°F superheat entering the valve, an evaporator temperature of 40°F.)
4. Valves shall be normally closed.
5. Valves shall operate when installed up to 20° off the vertical.
6. Coils shall be replaceable.
7. Coil housing rotates 360°.
8. Referenced documents shall be of the issue in effect on date of invitation for bid.
9. Dimensions are in inches.
10. Metric equivalents are given for general information only.

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Inches	mm
3.250	82.55
3.375	85.73
6.250	158.75
8.000	203.20
8.500	215.90
8.750	222.25

TABLE II. Maximum operating pressure differential (MOPD).

Electric current	Percent of rated voltage	MOPD (PSI)
AC	100	300
	85	300
DC	100	300
	85	300

REQUIREMENTS

Intended use. These solenoid valves are intended for use as refrigeration system controls.

Materials. Materials shall be of the quality normally used for the purpose by the manufacturer.

Certification. Solenoid valves shall meet the applicable requirements of UL 429, Electrically Operated Valves.

Standard product. The valves delivered under this specification shall be the manufacturer's commercially standard product, except for any changes necessary to comply with the specification requirements.

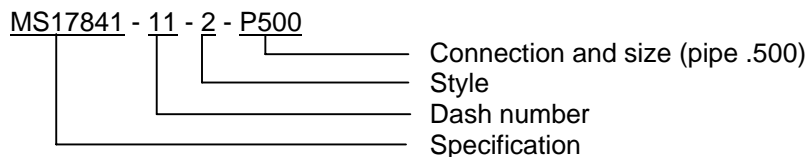
Marking. In addition to the marking required by UL 429, the valves shall be marked with the Maximum Operating Pressure Differential and the direction of flow of the refrigerant.

Workmanship. All parts of the finished valves shall be clean and free from pits, sprues, scale, flux or extraneous material. External surfaces shall be free from burrs and sharp edges. Passages shall be clean and free from pits, sprues, scale, flux and foreign material.

Valve characteristic: See table I.

MOPD: See table II.

Part or Identifying Number (PIN). The PIN is as follows:



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Note. The procurement specification, MIL-V-23289, was cancelled without replacement on 16 February 1993.

Changes from previous issue: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Reference documents. This document references the following:

ASME B16.22
SAE J513
UL 429

CONCLUDING MATERIAL

Custodians:

Army - GL
Navy - SH
Air Force - 99
DLA - CC

Preparing activity:

DLA - CC

(Project 4810-0127-000)

Reviewer activities:

Army – AT, CE, MD, MI
Navy - MC, SA

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://www.dodssp.daps.mil>.